



# Newsletter

2022 | Issue 1 | Carbo4Power

## *Project Overview*

The Carbo4Power is a 4-year project, which started in November 2020 and it is led by the National Technical University of Athens (NTUA), with the participation of a multidisciplinary team of 18 partners (8 SMEs) from 8 countries provides technological know-how and industrial leadership, with well-balanced dissemination, communication & exploitation impact.

This project is funded by the H2020-EU.2.1.3. (€ 7 8 million – Grant Agreement 953192). The main objective is to develop a new generation of lightweight, high strength, multifunctional, digitalized multi-materials for offshore turbine rotor blades that will increase their operational performance and durability while reducing cost of energy production, maintenance and their environmental impact.

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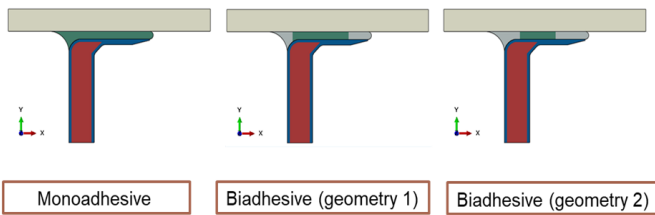
C4P Represented at the SmartFan  
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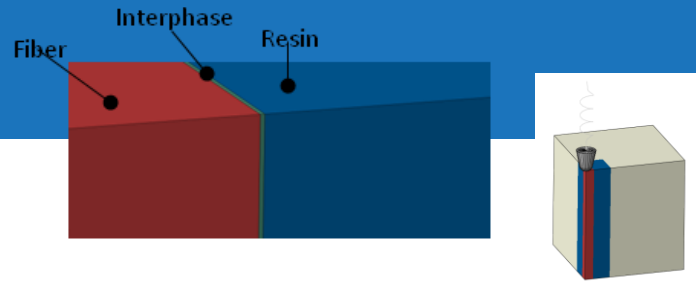
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## ITAINNOVA work in the project

In the last period ITAINNOVA has continued to work on the developments about innovative adhesive joints solutions for blades. The work being done covers, among others, the study of multiple-adhesive joints, based on the concept of functionally graded properties variation. Under this framework, various bond-lines configurations are being investigated considering different adhesives.



Other fields on which ITAINNOVA is collaborating is in the simulation of manufacturing processes (Infusion for one of the Tidal Turbine Blade demos) and on the modelling of Push-out tests for the characterization of superficial treatments for carbon fibers, complementing the experimental work being done by other partners.



Simulation of the Push-out test

## IRT Jules Verne activities in the project

IRT are carrying out processability tests with 3R resin (see image below). Several of these plates have been sent to the partner INEGI for mechanical testing. Another task IRT are involved, is the definition of the toolings required for the demonstrators manufacturing, this activity is still in progress.



Image of a post-cured 3R resin infused plate

## Carbo4Power in the news!

The project was showcased by the newspaper Heraldo from Zaragoza (Spain), in their magazine Tercer Milenio, which the Carbo4Power partner Itainnova, is collaborator. To read the article, please visit [this link](#).



This project is supported by the European Union under the HORIZON2020 Framework Programme Grant Agreement no. 953192. The contents of this Newsletter are the sole responsibility of the parties and cannot be considered as reflecting the position of the European Union.



## Carbo4Power represented at SmartFan

Carbo4Power was represented by NTUA (project coordinator) at the Smartfan Final Conference on Smart and intelligent composite structures for innovative industrial applications (8-9 December 2021). They presented a poster at this event.



Representatives of the consortium from INEGI, NTUA, IRES, ITA, IRT, BIO3G.

## Carbo4Power participated in the JEC 2022 -3rd-5th May -Paris

Partners from AIMEN, NTUA, IRES, BIO are participating in the JEC World in Paris, taking place from the 3rd-5th May 2022.



## Participation at the ECCM20 – 26-30 June 2022- Lausanne, Switzerland

Members of the partner organisation INEGI, gave a talk entitled “Fibres Hybridization for Thermoplastic Matrix Composites” at the European Conference on Composite Materials (ECCM20) held on the 26-30 June, in Lausanne, Switzerland.





# Carbo4Power Partners

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For more information on the Carbo4Power project, please visit the project website at:

[www.carbo4power.eu](http://www.carbo4power.eu)